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TRANSPORTATION SYSTEM SYNTHESIS

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TRANSPORTATION SYSTEM SYNTHESIS

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This bibliography is intended to indicate the wealth of sources available in the literature pertaining to the use of Operations Research and Management Science in the creation or synthesis of public transportation systems. A transportation system is viewed in its component parts--vehicles, networks and guideways, terminals, and controls--and is also placed in its role as a major factor in land use development. References regarding the possibility of arranging land use to suit transportation are presented as well.

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ABBREVIATIONS

The following abbreviations are used in the bibliography. The respective journals can be found in almost any technical library.

(1) ASCE: American Society of Civil Engineers

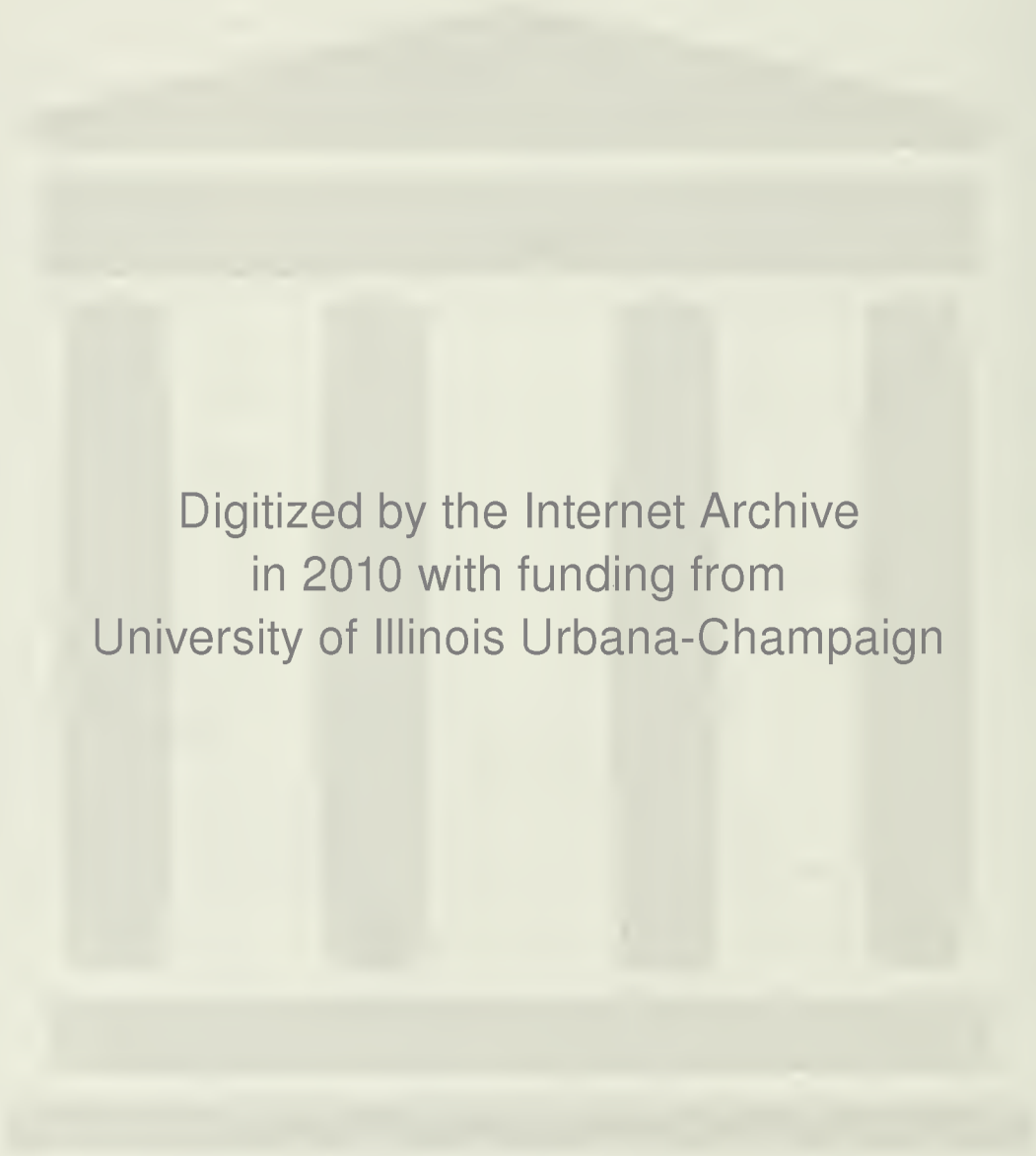
(2) CORS: Canadian Operations Research Society

(3) IEEE: Institute of Electrical and Electronics Engineers

(4) ORSA: Operations Research Society of America

(5) SIAM: Society for Industrial and Applied Mathematics

(6) TIMS: The Institute of Management Science



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GENERAL

1. Berge, C. and Ghouila, Houri, A., Programming, Games, and Transportation Networks, Wiley, New York, 1965.

2. Foldvary, L. A., "Distribution of Towns, Networks of Roads, and Structures of Traffic--Example New South Wales," Proc. Aust. Rd. Res. Bd., Vol. 3, Part 1, Sydney, 1966.

3. Hermann, R., (editor), Theory of Traffic Flow, Elsevier Press, New York, 1961.

VEHICLES

4. Ackoff, R. L., Progress in Operations Research, Vol. I, Wiley, New York, 1961.

5. Avi-Itzhak, B., Benn, B. A., and Powell, B. A., "Car Pool Systems in Railroad Transportation," Management Science, Vol. 13, No. 9, May, 1967.

6. Bartlett, T. E., "An Algorithm for the Minimum Number of Transport Units to Maintain a Fixed Schedule," Naval Research Logistics Quarterly, Vol. 4, June, 1957.

7. Bellmore, M., Bennington, G., and Lubore, S., "Extensions of the Tanker Scheduling Problem," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

8. Bennett, B. T. and Potts, R. B., "Rotating Roster for a Transit System," Trans. Sci., Vol. 2, No. 1, February, 1968.

9. Bisbee, E. F., Devanney, J. W. Bhatt, K. U., Kuroda, S. and Ward, E., "Operations Analysis of System Specifications, Part I, Passenger Scheduling," M.I.T., Department of Civil Engineering, Cambridge, November, 1966.

10. Bisbee, E. F., et al, "Dispatching Policies for Controlled Systems-Models on Effect of Travel Time and Travel Cost," Proc. Fourth Sym. on Traffic Flow Theory, Karlsruhe, Germany, 1968.

11. Black, A., "A Method for Determining the Optimal Division of Express and Local Rail Transit Service," Highway Research Board Bulletin No. 347, Washington, D.C., 1962.

12. Blumberg, D. F., "Use of Simulation in Analyzing Optimal Maintenance and Replacement of Motice Systems in Railroad Operations," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

13. Briskin, L., "The Tank Assignment Problem II," Presented to the 31st National Meeting of/ORSA, New York, June, 1967.

14. Broman, A. C., Arbarbi, M., and Dawson, M. D., " A Mathematical Approach to the Routing of Aircraft," Market Research Report, Sales & Contracts Department, Transport Div., Boeing Aircraft Company, Renton, Washington, 1958.

15. Buss, O. and Soland, R. M., "A Branch and Bound Algorithm for a Strategic Deployment Model in which Aircraft Productivity Depends on Aircraft Mix," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

16. Cabot, A. V., and Hurter, A. P., Jr., "Equipment Scheduling in River System Transportation," The Transportation Center, Northwestern University, Evanston, Illinois, 1962.

17. Charnes, A. and Miller, M. H., "A Model for the Optimal Programming of Railway Freight Train Movements," Management Science, Vol. 3, 1956.

18. Collins, F. R., Jr., and Guthrie, D., Jr., "A Model for the Analysis of A.E.W. and C.A.P. Aircraft Availability," Naval Research Logistics Quarterly, Vol. 10, No. 1, March, 1963.

19. Creighton, R.L., Gooding, D. I., Hammens, G. L. and Fidler, J. E., "Optimum Investment in Two-Mode Transportation Systems," Highway Research Board Record No. 47, Washington, D. C., 1964.

20. Dantzig, G. B., Blattnes, W. and Roa, M. R., "Finding a Cycle with Minimum Cost to Time Ratio with Application to a Ship Routing Problem," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

21. Dantzig, G. B., and Ramser, J. H., "The Truck Dispatching Problem," Management Science, Vol. 6, 1960.

22. D'esopo, D. A., Dixion, M. L., and Lefkowitz, B., "A Model for Simulating an Air-Transportation System," Naval Research Logistics Quarterly, Vol. 7, No. 3, September, 1960.

23. Devanney, J. W., "Transportation Scheduling Under Multi-Dimensional Demands," M.I.T., Department of Civil Engineering, Cambridge, December, 1967.

24. Elias, S. E. G., "A Mathematical Model for Optimizing the Assignment of Man and Machine in Public Transit Run Cutting," West Virginia University Research Bulletin No. 81, Morgantown, West Virginia, September, 1966.

25. Ferguson, A. R., and Dantzig, G. B., "The Allocation of Aircraft to Routes--An Example of Linear Programming Under Uncertain Demand," Management Science, Vol. 3, October, 1956.

26. Ferguson, A. R. and Dantzig, G. B., "The Problem of Routing Aircraft," Aeronautical Engineering Rev., Vol. XIV, April, 1955.

27. Finnegan, P., "A Method for Determining the Optimal Composition of an Aircraft Fleet," Boeing Company, Commercial Airplane Division, Report D6-29140, Seattle, Washington, 1968.

28. Gladstone, R. J., "Scheduling in Constant Speed Transportation Systems," Technical Report 34, Operations Research Center, M.I.T., Cambridge, January, 1968.

29. Gleaves, G. B., "Cyclic Scheduling and Combinatorial Topology: Assignment and Routing of Motive Power to Meet Scheduling and Maintenance Requirements, etc.," Naval Research Logistics Quarterly, Vol. 4, September, 1957.

30. Goldman, T. A., "Efficient Transportation and Industrial Location," Papers, Regional Science Association, Vol. 4, 1958.

31. Gurel, M. and Vargha, L., "Airline Fleet Planning--Restricted Models," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

32. Haynes, R. L., "The Delivery Problem," Presented at 31st National Meeting of ORSA, New York, June, 1967.

33. Heap, B. J., "Time of Departure Assignment in Aircraft Scheduling," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

34. Held, M. & Karp, R. M., "A Dynamic Programming Approach to Sequencing Problems," SIAM, Vol. 10, 1962.

35. Hogan, J. H., and Duckstein, L., "A Transportation Scheduling Model," Presented to 32nd National Meeting of ORSA, Chicago, November, 1967.

36. Holladay, J., "Some Transportation Problems and Techniques for Solving Them," Naval Research Logistics Quarterly, Vol. 11, No. 1, March, 1964.

37. Holroyd, E. M., "The Optimum Bus Service: A Theoretical Model for a Large Uniform Urban Area," in Vehicular Traffic Science, Elsevier Press, New York, 1967.

38. Hughes, R. L. Bercos, J., Johnson, J. N., McDowell, E. C., and Webster, D. B., "Computer Simulation of a Theater Transportation System: A Feasibility Study," Technical Paper VAC-TP-146, Research Analysis Corp., McLean, Va., 1965.

39. Hyman, W. and Gordon, L., "Commercial Airline Scheduling Technique," Trans. Res., Vol. 2, No. 1, March, 1968.

40. Jewell, W. S., "Allocation of Route Service in a Transportation Network," Research Report 68-12, Operations Research Center, U. of California, Berkeley, May, 1968.

41. Kingsley, J. D., "Airline Operations and Planning Model," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

42. Kuratani, Y., et al.,"A Global Optimization Problem in Bus Scheduling," Presented to the 31st National Meeting of ORSA, New York, June, 1967.

43. Lindeman, A. R., Smith, V. L., and Saposnik, R., "Allocation of a Resource to Alternative Probabilistic Demands: Transport-Equipment Pool Assignments," Naval Research Logistics Quarterly, Vol. 6, No. 3, September, 1959.

44. Miller, R. E., Domestic Airline Efficiency, M.I.T. Press, Cambridge, 1963.

45. McClosky, J. F. and Hanssmann, F., "An Analysis of Stewardess Requirements and Scheduling for a Major Airline," Naval Research Logistics Quarterly, Vol. 4, September, 1957.

46. Newell, G. F., and Potts, R. B., "Maintaining a Bus Schedule," Proc. Aust. Rd. Res. Board, Vol. 2, Part 1, Sydney, 1964.

47. Pierce, J. F., "On the Solution of Truck Dispatching by Combinatorial Programming," Presented to the 31st National Meeting of ORSA, New York, June, 1967.

48. Ramsburg, R. E. and Schwartz, M. R., "A Technique for Determining Optimum Headway Times for Urban Bus Facilities," Unpublished Report, Northwestern University, Evanston, Illinois, 1965.

49. Saposnik, R. and Smith, V. L., "Allocation of a Resource to Alternative Probabilistic Demands: Transport-Equipment Pool Assignments," Naval Research Logistics Quarterly, Vol. 6, No. 3, September, 1959.

50. Schwartz, N. L., "Discrete Programs for Moving Known Cargos from Origins to Destinations at Minimum Bargeline Fleet Cost," Trans. Sci., Vol. 2, No. 2, May, 1968.

51. Serfozo, R. F., "A Method for Determining the Optimal Composition of an Aircraft Fleet," Presented to the 31st National Meeting of ORSA, New York, June, 1967.

52. Simpson, R. W. and Neuve-Eglise, M., "Determining Vehicle Size and Frequency of Service for a Short Haul Air Transport System," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

53. Tingard, J. P., "On the Optimal Schedule of an On-Line Railway System," Research Report 68-6, Operations Research Center, U. of California, Berkeley, March, 1968.

54. Vadja, S., Readings in Linear Programming, Chapter 12, "Routing Aircraft," Wiley, New York, 1958.

55. vom Saal, R. J., "Fast Analytic Solutions for Optimal Schedules under Time-Varying Demands," Master of Science Thesis, Department of Naval Architecture, M.I.T., Cambridge, Sept., 1968.

56. VonGuerard, H. W., "An Economic Model for Assigning Passenger Airplane Flights," Lockheed Aircraft Corp., Burbank, 1959.

57. Ward, D. E., "Optimal Dispatching Policies by Dynamic Programming, Master of Science Thesis, Department of Civil Engineering, M.I.T., Cambridge, September, 1966.

58. Young, D., "Scheduling to Maximize Passenger Satisfaction," National Bureau of Standards Report 9569, Washington, D. C., July, 1967.

NETWORKS AND GUIDEWAYS

59. Bellmore, M., Greenberg, H. and Jarvis, T., "Optimal Attack of a Communications Network," Presented to the 32nd Annual Meeting of ORSA, Chicago, November, 1967.

60. Bunton, R. B. and Blunden, W. R., "An Analysis of Route Factors for One-Way and Two-Way Street Systems," Proc. Aust. Rd. Res. Board, Vol. 1, Part I, Sydney, 1962.

61. Callaway, A. R. and Casey, P. W., "Optimum Street Patterns," Proc. Aust. Rd. Res. Board, Vol. 2, Part 1, Sydney, 1964.

62. Carter, E. C. and Stowers, J. R., "A Model for the Allocation of Funds for Capacity Improvements for Urban Highway Systems," Highway Research Board Record No. 20, 1963.

63. Creighton, R. L., Hoch, I., Schneider, M. and Joseph H., "Estimating Efficient Spacing for Arterials and Expressways," Highway Research Board Bulletin 253, Washington, D. C., 1961.

64. Domanski, R., "Remarks on Simultaneous and Anisotropic Models of Transportation Networks, Comments on A. J. Scott," Papers, Regional Science Association, Vol. 19, 1967.

65. Einhorn, S. J., "Note on Polar vs. Rectangular Road Networks," Operations Research, Vol. 15, No. 3, May-June, 1967.

66. Eisemann, K., "The Optimum Location of a Center," SIAM Review, Vol. 4, No. 2, 1962.

67. Fairthorne, D., "The Distances Between Pairs of Points in Towns of Simple Geometric Shapes," Proc. 2nd Intern. Symposium on the Theory of Road Traffic Flow, O.E.C.D., Paris, 1965.

68. Fisher, H. T. and Boukidis, N. A., "The Consequences of Obliquity in Arterial Systems," Traffic Quarterly, January, 1963.

69. Funk, M. L. and Tillman, F. A., "A Dynamic Programming Approach to Optimal Construction Staging," to be presented to San Diego meeting of ASCE, 1967.

70. Garrison. W. L., and Marble, D., "Analysis of Highway Networks: A Linear Programming Formulation," Highway Research Board Proceedings, Vol. 37, 1958.

71. Gomory, R. E. and Hu, T. C., "Synthesis of a Communication Network," SIAM Journal, June, 1964.

72. Hakimi, S. L., "Optimal Location of Switching Centers and the Absolute Centers and Medians of a Graph," Operations Research, Vol. 12, No. 3, May-June, 1964.

73. Hay, G., Morlok, E. K., and Charnes, A., "Planning an Optimal Two-Mode Transportation System," Highway Research Board Record No. 148, Washington, D. C., 1966.

74. Holroyd, E. M., and Miller, A. J., "Route Crossings in Urban Areas," Proc. Aust. Rd. Res. Board, Vol. 3, Sydney, 1966.

75. Holroyd, E. M., "Routing Traffic in a Square Town to Minimize Route-Crossing," Proc. Fourth Sym. on Traffic Flow Theory, Karlsruhe, Germany, 1968.

76. Horn, W. A., "Optimal Networks Joining in Points in a Plane," Proc. Fourth Sym. on Traffic Flow Theory, Karlsruhe, Germany, 1968.

77. Ho, T. E., "The Maximum Capacity Route Problem," Operations Research, Vol. 9, No. 6, November-December, 1961.

78. Howard, G. T. and Nemhauser, G. L., "Optimal Capacity Expansion," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

79. Hu, T. C., "A Decomposition Algorithm for Shortest Paths in a Network," Operations Research, Vol. 16, No. 1, January-February, 1968.

80. Kalaba, R. E. and Juncosa, M. L., "Communication-Transportation Networks," Naval Research Logistics Quarterly, Sept., 1957.

81. Kalaba, R. E. and Juncosa, M. L., "Optimal Design and Utilization of Transportation Networks," Management Science, Vol. 3, 1956.

82. Kansky, K., The Structure of Transportation Networks, Dept. of Geography Res. Paper No. 86, U. of Chicago, Chicago, 1962.

83. Kondo, J., "Determination of Optimum Transport Capacity," J. of Operns. Res. Soc. of Japan, Vol. 9, No. 1, Dec., 1966.

84. Kuenne, R. E. and Kuhn, H. W., "An Efficient Algorithm for the Numerical Solution of the Generalized Weber Problem in Spatial Economics," Journal of Regional Science, Vol. 4, No. 2, 1962.

85. Lesso, W. G., "An Algorithm for the Optimal Selection, Sequence and Timing of Interrelated Major Capital Investments," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

86. Levinson, H. S., and Roberts, K. R., "System Configuration in Urban Transportation Planning," Highway Research Board Record No. 64, Washington, D.C., 1965.

87. Manheim, M. L., "Highway Route Location as a Hierarchically Structured Sequential Decision Process," Unpublished Ph.D. Dissertation, M.I.T., Cambridge, Massachusetts, May, 1964.

88. Miehle, W., "Link-Length Minimization in Transportation Networks," Operations Research, Vol. 6, No. 2, 1958.

89. Miller, A. J., "On Spiral Road Networks," Trans. Sci., Vol. 1, No. 2, May, 1967.

90. Mills, G., "A Decomposition Algorithm for the Shortest-Route Problem," Operations Research, Vol. 14, No. 2, March-April, 1966.

91. Palermo, F. P., "A Network Minimization Problem," IBM Journal, October, 1961.

92. Pandit, S. N., "The Shortest-Route Problem--An Addendum," Operations Research, Vol. 9, No. 1, January-February, 1961.

93. Peout, R. M., Randolph, P. D., and Bartlett, T. E., "The Shortest-Route Problem," Operations Research, Vol. 8, No. 6, November-December, 1960.

94. Peterson, J. H., "Freeway Spacing in an Urban Freeway System," ASCE, Journal of Highway Division, Vol. 86, No. 1, 1960.

95. Plaza, J. A., "On the Optimum Program of Highway Improvements, A Mathematical Highway Approach," Unpublished Master's Thesis, Northwestern University, Evanston, Illinois, 1962.

96. Prager, W., "On the Design of Communication and Transportation Networks," in Theory of Traffic Flow, Herman, R. (ed.), Elsevier Press, New York, 1961.

97. Price, W. L., "Increasing the Capacity of a Network Where the Costs are Nonlinear: A Branch and Bound Algorithm," CORS Journal, Vol. 5, No. 2, July, 1967.

98. Quandt, R. E., "Models of Transportation and Optimal Network Construction, Journal, Regional Science Association, Vol. 2, 1956.

99. Roberts, P. O., Burns, R. E., and Tabora, P. N., "A Model for the Formulation of Transport System Alternatives," Reprint No. 316, ASCE Structural Conf., Miami, 1966.

100. Roberts, P. O. and Funk, M. L., "Toward Optimum Methods of Link Addition in Transportation Networks," Civil Engineering Department, Northwestern University, Evanston, Illinois, September, 1964.

101. Saigal, R., "A Constrained Shortest Route Problem," Operations Research, Vol. 16, No. 1, January-February, 1968.

102. Schofer, J. S. and Wegmann, F. J., "A Transportation System Plan Design Model: Normative Approaches to System Formulation," Unpublished Report, Civil Engineering Dept., Northwestern University, Evanston, Illinois, 1966.

103. Scott, A. J., "A Programming Model of an Integrated Transportation Network," Papers, Regional Science Association, Vol. 19, 1967.

104. Smeed, R. J., "The Effects of Some Kinds of Routing System on the Amount of Traffic in the Central Areas of Towns," J. Inst. Hwy. Engineers, Vol. 10, 1963.

105. Smeed, R. J., "The Road Space Required for Traffic in Towns," Town Planning Review, January, 1963.

106. Smeed, R. J. and Jeffcoate, G. O., "Traffic Flow During the Journey to Work in the Central Area of a Town Which has a Rectangular Grid for its Road System," Proc. 2nd Sym. Theory of Traffic Flow, OECD, Paris, 1965.

107. Stairs, S., "Selecting an Optimal Traffic Network," J. of Transport Economics and Policy, Vol. 2, No. 2, May, 1968.

108. Tan, T., "Road Networks in an Expanding Circular City," Operations Research, Vol. 14, No. 4, July-August, 1966.

109. Tanner, J. C., "A Theoretical Model for the Design of a Motorway System," Report No. 23, Road Research Lab., Crowthorne, England, 1966.

110. Wang, J. J., Snell, R. R., and Funk, M. L., "Toward a Solution for the Optimal Allocation of Investment in Urban Transportation Networks," Presented to the Highway Research Board Meeting, Washington, D.C., January, 1968.

111. Wollmer, R. D., "Removing Arcs from a Network," Operations Research, Vol. 12, No. 6, November-December, 1964.

112. Yan, S. S., "Sensitivity of a Traffic Network," Franklin Institute Journal, Vol. 278, No. 6, December, 1964.

CONTROLS

113. Beckmann, M. J., "On Optimal Tolls for Highways, Tunnels, and Bridges," in Vehicular Traffic Science, Elsevier Press, New York, 1967.

114. Beckmann, M. J., McGuire, C. B., and Winsten, C. B., Studies in the Economics of Transportation, Yale U. Press, New Haven, 1956.

115. Browne, J. J. and Kelly, J. J., "Simulation of Elevator System for World's Tallest Buildings," Trans. Sci., Vol. 2, No. 1, February, 1968.

116. Charnes, A. and Cooper, W. W., "Some Problems and Models for Time-Phased Transport Requirements," Naval Research Logistics Quarterly, Vol. 7, No. 4, December, 1960.

117. Charnes, A., et al., "Chance Constrained Models for Transport Pricing and Scheduling under Competition," Trans. Sci., Vol. 2, No. 1, February, 1968.

118. Cunliff, J. P., "A Survey of Railway Signaling and Control," Proceedings of the IEEE, Vol. 56, No. 4, April, 1968.

119. Frank, O., "Two-Way Traffic on a Single Line of Railway," Operations Research, Vol. 14, No. 5, September-October, 1966.

120. Gazis, D. C., "Optimal Assignment of a Reversible Lane in an Oversaturated Two-Way Traffic Link," in Vehicular Traffic Science, Elsevier Press, New York, 1967.

121. Hajdu, L. P., Gardiner, K. W., Tamura, H., and Pressman, G. L., "Design and Control Considerations for Automated Ground Transportation Systems," Proceedings of the IEEE, Vol. 56, No. 4, April, 1968.

122. Helly, W., "Two Doctrines for the Handling of Two-Priority Traffic by a Group of N Servers," Operations Research, Vol. 10, No. 2, March-April, 1962.

123. Levis, A. H., "On the Optimal Sampled Data Control of Strings of Vehicles," Trans. Sci., Vol. 2, No. 4, November, 1968.

TERMINALS

124. Cramer, B. E., "Optimum Allocation of Transportation Terminals in Urban Areas," M.I.T., Department of Civil Engineering, Cambridge, November, 1966.

125. Hoffman, G. A., "Minimizing Land Used by Automobiles and Buses in Urban Central Core: Underground Highways and Parking Facilities," Highway Research Board Record No. 102, Washington, D.C., Dec., 1965.

126. Newell, R. R., "Rapid Transit With Feeder Bus System: Optimum Station Spacing," City and Suburban Travel, Los Angeles, California, April, 1962.

127. Newman, D. H., "A Parking Lot Design," SIAM Review, Vol. 6, No. 1, 1964.

128. O'Neill, R. R., "Analysis and Monte Carlo Simulation of Cargo Handling," Naval Research Logistics Quarterly, Vol. 4, No. 3, Sept. 1957.

129. O'Neill, R. R. and Weinstock, J. K., "The Cargo Handling System," Naval Research Logistics Quarterly, Vol. 21, No. 4, Dec., 1954.

130. Roberts, P. O., Shoup, D. S. and Ginn, J. R., "A Model for the Simulation of Transfer Operations in Multi-Mode Transportation Networks," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

131. Vuchic, V. R., "Interstation Spacings for Line-Haul Passenger Transportation," Graduate Report, Inst. of Traf. and Trans. Engr., U. of California, Berkeley, December, 1966.

FLOW, TRAVEL, AND SHIPMENT PATTERNS

132. Anderson, G. L. and Self, G. D., "Maximizing Total Traffic Flow in a Parallel Street System with Freeway Access Constrained by Metering," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

133. Auberger, M., "Equilibrium Traffic on an Urban Axis and Distribution of Users Between Public and Private Transportation," Trans. Res., Vol. 2, No. 2, June, 1968.

134. Balinski, M. L., "Fixed-Cost Transportation Problems," Naval Research Logistics Quarterly, Vol. 8, No. 1, March, 1961.

135. Barankin, E. W., "A Delivery-Lag Inventory Model with Emergency Provision (The Single-Period Case)," Naval Research Logistics Quarterly, Vol. 8, No. 3, September, 1961.

136. Baumol, W. J. and Kuhn, M. W., "An Approximative Algorithm for the Fixed-Charge Transportation Problem," Naval Research Logistics Quarterly, Vol. 9, No. 1, March, 1962.

137. Beale, E. M. L., "An Algorithm for Solving the Transportation Problem When the Shipping Cost Over Each Route is Convex," Naval Research Logistics Quarterly, Vol. 6, No. 1, March, 1959.

138. Beckmann, M. J., "Modal Choice in Intercity Travel," Proc. Fourth Sym. on Traffic Flow Theory, Karlsruhe, Germany, 1968.

139. Bellman, R., "Notes on the Theory of Dynamic Programming--Transportation Models," Management Science, Vol. 4, 1958.

140. Bellmore, M. and Nemhauser, G. L., "The Traveling Salesman Problem: A Survey," Operations Research, Vol. 16, No. 3, May-June, 1968.

141. Charnes, A., Cooper, W. W., and Soyster, H. R., "Mathematical Programming and Evaluation of Freight Shipment Systems," Naval Research Logistics Quarterly, Vol. 4, 1957.

142. Conley, J. H., Farnsworth, R. S., Koenigsberg, E. and Weirsema, U., "A Linear Programming Approach to the Total Movement of a Homogeneous Product," Trans. Sci., Vol. 2, No. 4, Nov., 1968.

143. Eklof, W. D. and Nemhauser, G. L., "A Multiperiod Transportation Problem with Stochastic Demands," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

144. Eldredge, D. L., "A Model for 'Optimizing' Distribution Systems," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

145. Erlander, S., "Transportation of Laundry--A Nonlinear Optimization Problem," Trans. Res., Vol. 2, No. 4, Dec., 1968.

146. Flood, M. M., "A Transportation Algorithm and Code," Naval Research Logistics Quarterly, Vol. 8, No. 3, September, 1961.

147. Flores, B., and Roberts, S. M., "An Engineering Approach to the Traveling Salesman Problem," Management Science, Vol. 13, 1967.

148. Ford, L. R., and Fulkerson, D. R., Flows in Networks, Princeton U. Press, Princeton, New Jersey, 1962.

149. Ford, L. R., and Fulkerson, D. R., "Solving the Transportation Problem," Management Science, Vol. 3, 1957.

150. Funk, M. L., Snell, R. R., and Blackburn, J. B., "Optimal Allocation of Trips to a Street Network," A.S.C.E. Hwy. Div. Journal, Vol. 93, No. HW2, November, 1967.

151. Gerson, M. L. and Maffei, R. B., "Technical Characteristics of Distribution Simulators," Management Science, Vol. 10, 1963.

152. Ghare, P. M., "A Graphical Interpretation of the Multi-Index Transportation Problem," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

153. Gray, P., "Exact Solution of the Fixed Charge Transportation Problem," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

154. Hamburg, J. R., et al, "Linear Programming Test of Journey-to-Work Minimization," Highway Research Board Record No. 102, Washington, D. C., Dec., 1965.

155. Hershdorfer, A. M., "Optimal Routing of Urban Traffic," Unpublished Thesis, M.I.T., Cambridge, Massachusetts, June, 1965.

156. Hoffman, A. J., and Markowitz, H. M., "Shortest Path Assignment and Transportation Problems," Naval Research Logistics Quarterly, Vol. 10, No. 4, December, 1963.

157. Johnson, D. L., "Network Flow Theory and Its Application to Air Transport Problems," Boeing Scientific Research Lab., Mathematical Note No. 218, Seattle, 1960.

158. King, W. R., "Historical Estimating Behavior and Network Simulations," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

159. Lewis, R. W., Rosholdt, E. F., and Wilkinson, W. L., "A Multi-Mode Transportation Network Model," Naval Research Logistics Quarterly, Vol. 12, No. 3/4, September-December, 1965.

160. Lin, S., "Computer Solution of the Traveling Salesman Problem," Bell System Tech. J., Vol. 44, 1965.

161. Little, J. D. C., Murty, K. G., Sweeney, D. W. and Karel, C., "An Algorithm for the Traveling Salesman Problem," Operations Research, Vol. 11, 1963.

162. Llewellyn, R. W., "Travel Charting with Realistic Criteria," Journal of Industrial Engineering, Vol. 9, 1958.

163. Loubal, P. S. and Potts, R. B., "A Mathematical Model for Trip Distribution," Proc. Fourth Sym. on Traffic Flow Theory, Karlsruhe, Germany, 1968.

164. Manne, A. S., "Air Cargo Transport Scheduling--An Illustrative Block Triangular System," Rand Corp. Paper P-533, June 11, 1954.

165. McDonald-Taylor, R., "Scheduling a Transportation Network," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

166. McIlroy, M. D., "Transportation Problems with Distributed Loads," in Recent Advances in Mathematical Programming, Graves, R. L., and Wolfe, P. (editors), McGraw-Hill, New York, 1963.

167. Oliver, T. M., "An Entropy Minimizing Traffic Distribution Model," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

168. Orden, A., "The Transshipment Problem," Management Science, Vol. 2, January, 1956.

169. Pinnell, C. and Satterly, G. T., Jr., "Analytical Methods in Transportation: System Analysis for Arterial Street Operation," Journal of Eng. Mech. Div., ASCE, Vol. 89, No. EM6, December, 1963.

170. Roa, M. R. and Zionts, S., "Allocation of Transportation Units to Alternative Trips--A Column Generation Scheme with Out-of-Kilter Subproblems," Operations Research, Vol. 16, No. 1, January-February, 1968.

171. Rothfarb, W., Shein, N. P. and Frisch, I. T., "Common Terminal Multicommodity Flow," Operations Research, Vol. 16, No. 1, January-February, 1968.

172. Soyster, H. R. (Part I, "Applications"), Charnes, A. and Miller, M. H., (Part II, "Analysis"), "Mathematical Programming and Evaluation of Freight Shipment Systems," Naval Research Logistics Quarterly, Vol. 4, No. 3, September, 1957.

173. Szware, W., "The Transportation Problem with Stochastic Demand," Management Science, Vol. 11, 1965.

174. Tan, T., "A Mathematical Model for Commuter Traffic in Satellite Towns," Trans. Sci., Vol. 1, No. 1, March, 1967.

175. Tillman, F. A., Pai, D. K., Funk, M. L., and Snell, R. R., "An Iterative Approach to Traffic Assignment," Trans. Res., Vol. 2, No. 1, March, 1968.

176. Tomlin, J. A., "A Linear Programming Model for the Assignment of Traffic," Proc. Aust. Rd. Res. Board, Vol. 3, Part 1, Sydney, 1966.

177. U.C.L.A., Users Manual--Transsim, General Purpose Transportation Simulator, Federal Clearinghouse, Springfield, Virginia, 1963.

178. Wattleworth, J. A. and Shuldiner, P. W., "The Inclusion of Left Turns in Traffic Prediction Models of the Charnes-Cooper Type," Presented at ASCE Meeting, October, 1962.

179. Williams, A. C., "A Stochastic Transportation Problem," Operations Research, Vol. 10, No. 5, September-October, 1963.

180. Wohl, M., "Another View of Transport System Analysis," Proceedings of the IEEE, Vol. 56, No. 4, April, 1968.

181. Wollmer, R. D., "Maximizing Flow Through a Network with Node and Arc Capacities," Presented at 31st National Meeting of ORSA, New York, June, 1967.

182. Yang, T. and Snell, R. R., "Traffic Assignment by the Maximum Principle," ASCE Hwy. Div. Journal, Vol. 92, No. HW2, Oct., 1966.

LAND USE DEVELOPMENT AND ARRANGEMENT

183. Alexander, M. N., et al, "Effect of Population Mobility on the Location of Communal Shelters," Operations Research, Vol. 6, No. 2, March-April, 1958.

184. Armour, G. C. and Buffa, E. S., "A Heuristic Algorithm and Simulation Approach to Relative Location of Facilities," Management Science, Vol. 9, No. 2, 1963.

185. Beckmann, M. and Marschak, T., "An Activity Analysis Approach to Location Theory," Kyklos, Vol. 8, 1955.

186. Bellman, R., "An Application of Dynamic Programming to Location-Allocation Problems," SIAM Review, Vol. 7, No. 2, 1965.

187. Berman, A. and Edward, B., "Regional Production and Transportation Model," Management Science, Vol. 5, 1959.

188. Bindshedler, A. E. and Moore, J. M., "Optimal Location of New Machines in Existing Plant Layouts," Journal of Industrial Engineering, January-February, 1961.

189. Black, A., "Optimizing Density of Development with Respect to Transportation Cost," Highway Research Board Record No. 207, Washington, D.C., 1967.

190. Buffa, E. S., "Sequence Analysis for Functional Layouts," Journal of Industrial Engineering, Vol. 6, 1955.

191. Buffa, E. S., Armour, G. C. and Vollman, T. E., "Allocating Facilities with CRAFT," Harvard Bus Rev., Vol. 42, 1964.

192. Burns, L. S., "A Programming Model for Urban Development," Papers, Regional Science Association, Vol. 11, 1963.

193. Clarke, S. and Surkis, J., "A Transportation Model of Racial Desegregation in School Systems," Presented to the 32nd National Meeting of ORSA, Chicago, November, 1967.

194. Conway, R. W. and Maxwell, W. L.,"A Note on the Assignment of Facility Location," Journal of Industrial Engineering, Vol. 12, No. 1, January-February, 1961.

195. Cooper, L., "Heuristic Methods for Location-Allocation Problems," SIAM Review, Vol. 6, No. 1, 1964.

196. Cooper, L., "Location-Allocation Problems," Operations Research, Vol. 11, No. 3, May-June, 1963.

197. Dickey, J. W. and Steiss, A. W., "Programming Models in the Planning Process," Jour. of High Speed Ground Transportation, Vol. 3, No. 1, Jan., 1969.

198. Echols, R. G. and Dickey, J. W.; "Optimal Facility Location with Respect to Campus Travel," Proposal to Research Division, Virginia Polytechnic Institute, Blackburg, Virginia., August, 1967.

199. Flores, B., "Quantitative Tools for Plant Layout," M.S. Thesis, University of Houston, 1964.

200. Francis, R. L., "A Note on the Optimal Location of New Machines in Existing Plant Locations," Journal of Industrial Engineering, January-February, 1963.

201. Francis, R. L., "On the Location of Multiple New Facilities with Respect to Existing Facilities," Journal of Industrial Engineering, Vol. XV, No. 2, March-April, 1964.

202. Francis, R. L., "Sufficient Conditions for Some Optimum Property Facility Designs," Operations Research, Vol. 15, No. 3, 1967.

203. Friedrich, P., "Mathematical Description of Life in Settled Areas and Derivation of Plan Layout Thereof as a Problem of Theoretical Town Planning," Proc. 2nd Sym. Theory of Traffic Flow, OECD, Paris, 1965.

204. Gavett, J. W. and Plyter, N. V., "The Optimal Assignments of Facilities to Locations by Branch and Bound," Operations Research, Vol. 14, No. 2, 1966.

205. Gilmore, P. C., "A Solution to the Module Placement Problem," IBM Research Report RC-430, April 26, 1961.

206. Gilmore, P. C., "Optimal and Suboptimal Algorithms for the Quadratic Assignment Problem," SIAM Jour., Vol. 10, 1962.

207. Hardgrave, W. W., "Location-Allocation Problems: A Survey," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

208. Hemmens, G. C., "Experiments in Urban Form and Structure," Highway Research Board Record No. 207, Washington, D.C., 1967.

209. Herbert, J. D., and Stevens, B. H., "A Model for the Distribution of Residential Activity in Urban Areas," P. J. Paper No. 2, Penn-Jersey Transportation Study, Phila., 1960.

210. Hiller, F. S. "Quantitative Tools for Plant Layout Analysis," Journal of Industrial Engineering, Vol. 14, No. 1, January-February, 1963.

211. Hiller, F. S. and Conners, M. M., "Quardratic Assignment Problem Algorthims and the Location of Indivisible Facilities," Management Science, Vol. 13, No. 1, September, 1966.

212. Hurter, A. P. and Moses, L. N., "Transportation and the Spatial Distribution of Economic Activity," in Essays in Regional Economic Science, U. of Illinois Press, Urbana, Illinois, 1963.

213. Isard, W., Methods of Regional Analysis, M.I.T. Press, Cambridge, 1960.

214. Joseph, J. A., "Heuristic Approach to Nonstandard Form Assignment Problems," Operations Research, Vol. 15, No. 4, 1967.

215. Kadas, C., "The Impact of the Development of Transportation on the Optimal Size of Plants and on Optimal Regional Location," Papers, Regional Science Association, Vol. 12, 1964.

216. Kellcher, G. J., "A Damage-Limiting Shelter Allocation Strategy," Operations Research, Vol. 15, No. 2, March-April, 1967.

217. Koopmans, T. C., Activity Analysis of Production and Allocation, Cowles, Commission Monograph #13, Wiley, New York, 1951.

218. Lawler, E. L., "The Quadratic Assignment Problem," Management Science, Vol. 9, 1963.

219. Lefeber, L., Allocation in Space: Production, Transport and Industrial Location, North Holland, Amsterdam, 1958.

220. Love, F., "A Nonlinear Programming Approach to Facilities Location Problems," Presented to the 31st National Meeting of ORSA, New York, June, 1957.

221. Maggio, R. A. and Dake, J. L., "Location and Production: An Algorithm," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

222. Mohring, H. D. and Harwitz, M., Highway Benefits, Northwestern U. Press, Evanston, Illinois, 1962.

223. Moore, J. M., "Optimal Locations for Multiple Machines," Journal of Industrial Engineering, Vol. 12, No. 5, September-October, 1961.

224. Moore, J. M., Plant Layout and Design, Macmillan Company, New York, 1962.

225. Moses, L. N., "A General Equilibrium Model for Production Interregional Trade, and Location of Industry," The Review of Economics and Statistics, Vol. XLII, No. 4, November, 1960.

226. Nugent, C. E., "On Sampling Approaches to the Solution of the n x m Static Sequencing Problem," Doctoral Dissertation, Cornell U., Ithaca, New York, 1964.

227. Nugent, C. E., Vollmann, T. E. and Ruml, J., "An Empirical Comparison of Techniques for the Assignment of Facilities to Locations," Operations Research, Vol. 16, No. 1, January-February, 1968.

228. Rosenthal, M. R. and Smith, S. B., "Solution of the 1-Center Problem, the m-Center Problem and the Location-Allocation Problem," Presented to the 31st National Meeting of ORSA, New York, 1967.

229. Rutenburg, D., "Plant Location Under Economics of Scale in Production and Transportation," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

230. Sharp, J. F., Snyder, J. C. and Greene, J. H., "An Algorithm for Solving the Multi-Facility Production Transportation Problem with Nonlinear Production Costs," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

231. Sifferd, D. W. and Shenoy, B. V., "A Heuristic Simulation Approach for Locating Warehouses and Plant Facilities," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

232. Singer, S., "Multi-centers and Multi-medians of a Graph with an Application to Optimal Warehouse Location," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

233. Soberman, R. M., "Road Transport and Economic Development in the Venezuela Guayana," Unpublished Ph.D. Thesis, Civil Engineering Department, M.I.T., Cambridge, Massachusetts, 1963.

234. Sovereign, M. G., "A Location-Allocation Model with Transport, Fixed and Volume Relation Costs," Presented to the joint ORSA-TIMS meeting, San Francisco, May, 1968.

235. Sprelberg, K., "A Plant Location Algorithm Related to Direct Search Mixed Integer Programming," Presented to the 31st National Meeting of ORSA, New York, June, 1967.

236. Steinberg, L., "The Blackboard Wiring Problem: A Placement Algorithm," SIAM Rev., Vol. 3, 1961.

237. Strotz, R. H., "Urban Transportation Parables," Research Report, The Transportation Center, Northwestern University, Evanston, Illinois, 1961.

238. Vollman, T. E., "An Investigation of the Bases for the Relative Location of Facilities," Doctoral Dissertation, U.C.L.A., Los Angeles, 1964.

239. Vollman, T. E., and Buffa, E. S., "The Faculty Layout Problem in Perspective," Management Science, Vol. 12, No. 10, June, 1966.

240. Wimmert, R. J., "A Mathematical Method of Equipment Location," Journal of Industrial Engineering, Vol. 9, No. 6, November-December, 1958.

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